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ABSTRACT

The paper, presented at a four-State adult education regional institute, first presents some problems in developing curricula for adult and continuing education, drawing distinctions between the terms "curriculum" (content-centered, credit offerings) and "program" (learner-centered, or problem-centered, non-credit offerings). The process of program planning, the second topic discussed, is illustrated by Houle's model, showing the various decision points in the design of an educational activity. The author then focuses on resources for curriculum development. The use of resources can alleviate some problems posed by lack of direct participation by adult learners in designing content-centered learning activities: human resources include advisory groups, composed of both labor and management representatives, to provide curriculum design input; material resources include books (some useful titles are cited) and data bases. The Educational Resources Information Clearinghouse (ERIC) data base is discussed in some detail and other data bases are cited as sources for curriculum development. Searches of data bases give access to the names of individuals, institutions, agencies, and other organizations creating curriculum materials. The paper concludes with an explanation of how to utilize the ERIC Clearinghouse in Career Education (ERIC/CICE). (AJ)

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Resources and Sources for Curriculum Development

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The topic of my presentation, "Resources and Sources for Curriculum Development," is of utmost concern to us as adult educators who work directly in the field. And it is also a major concern of state agencies, e.g., in my state of Illinois, the Department of Adult Vocational and Technical Education has recently awarded four contracts to establish regional resource centers for adult educators. On the national level, federal agencies are showing increased awareness of the importance of disseminating materials and other resources to adult educators. One resource which I will discuss later is ERIC, which changed its name -- and thereby greatly enlarged its scope -- from Educational Research Information Center to Educational Resources Information Center.

My approach will be to pursue our topic under five headings:

1. Some problems in developing curricula for adult and continuing education;
2. The program planning process;
3. Resources for curriculum development;
4. Sources for curriculum development; and
5. ERIC

Problems in Developing Curricula

One problem in developing curricula in adult and continuing education bears a relationship to a philosophical position that many adult educators have taken when designing learning activities -- that is, they believe in planning with as well as for adults. This approach has great value, but it can sometimes produce a tendency to concentrate on short-range activities and immediate needs, rather than on the long-term considerations involved in curriculum planning. Here, I am contrasting "curriculum" with "program,"

which is typically the non-credit course. As London says, it places emphasis on "flexibility of content so as to meet the needs and interests of participating adults."[1] On the other hand, the more formal credit course, termed a "curriculum,"[2,3] is rarely tailored to the needs and interests of adults. Commonly, adults desiring to take credit courses must enroll in those designed for a much younger population.

I realize, of course, that the distinction between credit and non-credit offerings (curriculum and program) has become blurred with the recent acceptance of the Continuing Education Unit as a measure for awarding credit for non-credit activities. One such Unit is awarded for ten hours of attendance at a non-credit activity.[4] But, regardless of the blurring of the distinction, it remains a fact that curriculum development in adult education generally is limited -- although more is being done in adult vocational education than in other areas.

Farmer provides us with excellent insights into types of learning activities which I see as helpful to us in considering the implications of the terms "curriculum" and "program." He lists three types of learning activities, as follows:

1. Type I -- Content-Centered Adult Education. This type of adult education is provided primarily to teach knowledge, attitudes, or skills. This educational process starts with what is to be taught and who is to teach it. Then, learners are sought who are willing to learn that type of information [e.g., an apprentice program that would include training in one or more industrial occupations or trades] .

2. Type II -- Learner-Centered Adult Education. In this type of adult education, attention is paid primarily to assisting adults in learning what it is they wish to learn, usually with the teacher acting as a facilitator who helps as a co-investigator or as one who makes possible self-directed learning. The learner typically seeks to learn particular knowledge, attitudes, or skills which will help in solving problems important to himself and, hopefully, in solving similar problems on his own [e.g., an industrial safety program to reduce on the job accidents] .

3. Type III -- Problem-Centered Adult Education. This type of adult education primarily focuses on problems that require some form of learning, in order for the problems addressed to be solved. This approach starts with the real and pressing problem and asks: "What is it in the solving of this problem to which the education of adults can contribute through the learning of knowledge, attitudes, or skills?" Then the question is asked: "Which adults need to be and can be involved in educational experiences which can lead or contribute to the solution of the problem addressed?"[5] [e.g., an industrial manufacturer in switching over to metrics might design and implement an adult education program to achieve this objective].

It is with Type I learning (that is, content-centered) that we are mainly concerned in planning curricula for adults. Traditionally, those activities have been developed in secondary and post-secondary institutions, with little attention to the needs of adults. Recently, however, there has been a more pronounced trend toward creating specifically adult curricula and materials, notably in adult basic education and intraining activities in the military services and industry. The advantage of this approach is that it generates an organized, competency-based series of objectives and activities that are clear to both teacher and learner and that can be measured. This content-centered approach is the one that dominates curriculum planning today, whereas the learner-centered and problem-centered approaches seem to characterize program planning. In fact, the latter two should also be important factors in curriculum planning, in my opinion. If we fail to take into account the needs of adults, we will ignore their life experiences and, consciously or unconsciously, mold them in the image of a younger population with distinctly different needs, interests, and life-styles. This tendency has, in the past, seriously hampered the creation of resources specially designed for adult students. A further problem is that even where a curriculum is devised, the marginality of adult education has made it extremely difficult, because of the expense involved, for individuals designing it to reproduce and distribute it widely.

In the world of publishing, there has been a reluctance to make commitments to publish curriculum guides and materials in this area. It is, after all, difficult to reach decisions affecting such a diverse clientele with so many different needs. However, there are some exceptions, e.g., renewed interest in the potential market for guides and materials relating to adult basic education and renewed interest in the area of technical education, as exemplified by such publishers as Follet, Steck-Vaughn, Howard Sams, and American Tech.

One reason for these trends in the development of curricula for adult learners has been the passage of legislation in certain states to make participation by adults in some type of course a prerequisite for re-licensing and re-certification. Such mandatory education is raising important issues among adult educators. It was, in fact, the theme of the annual conference of the Northwest Adult Education Association; and recently in Chicago, the University of Illinois conducted a major conference entitled "Mandatory Continuing Education: Prospects and Dilemmas for Professionals." Of course, for organizations, agencies, and publishers, this emphasis on mandatory adult education suggests a potential mass market for curriculum guides and other resources.

The Program Planning Process

According to Houle, "the planning or analysis of an education activity may be undertaken by an educator, a learner, an independent analyst, or some combination of the three."[6] The complexity of program planning is illustrated by Houle's model, which shows the various decision points in the design of an educational activity. Houle has emphasized that these are interacting elements, not a logical sequence of steps.

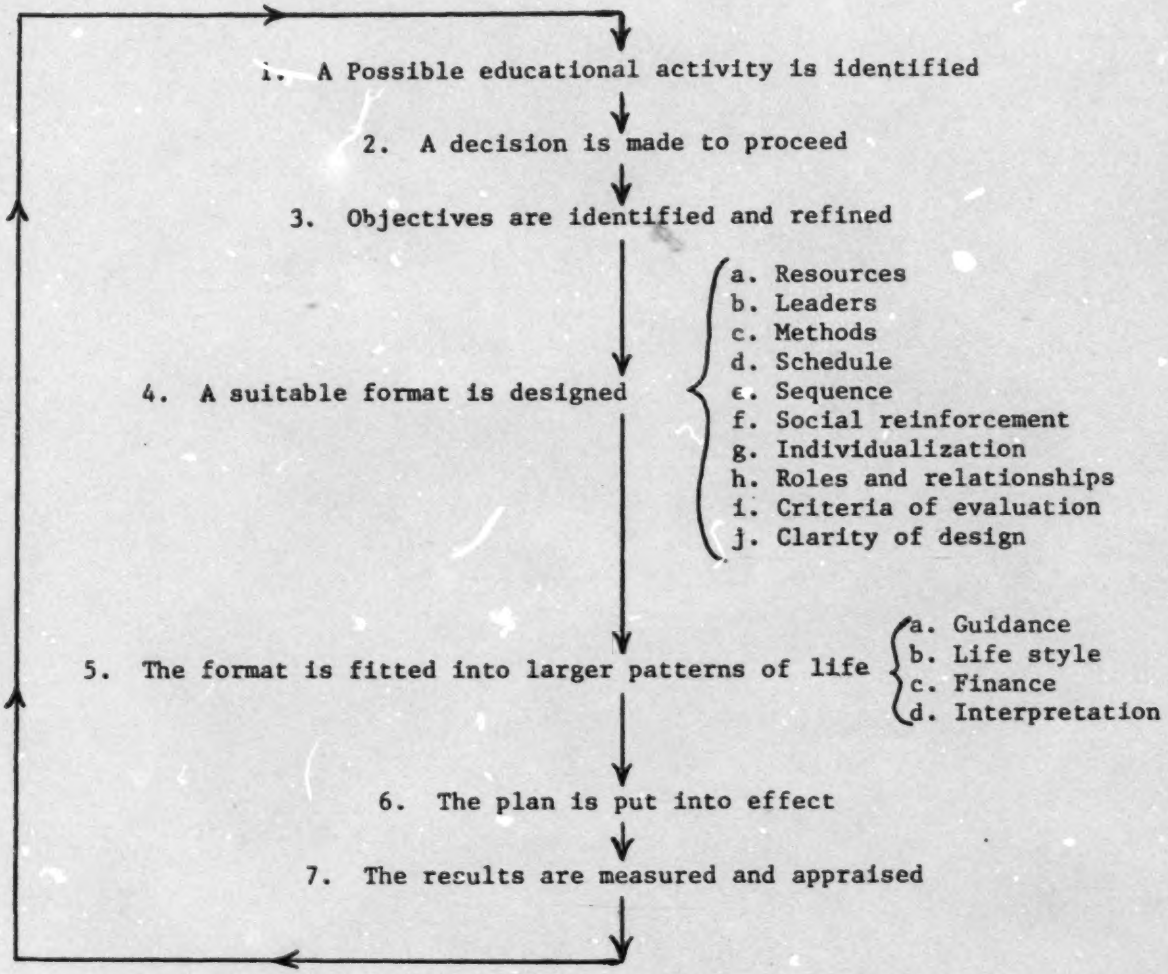
1. A Possible educational activity is identified
2. A decision is made to proceed
3. Objectives are identified and refined
4. A suitable format is designed
a. Resources
b. Leaders
c. Methods
d. Schedule
e. Sequence
f. Social reinforcement
g. Individualization
h. Roles and relationships
i. Criteria of evaluation
j. Clarity of design
5. The format is fitted into larger patterns of life
a. Guidance
b. Life style
c. Finance
d. Interpretation
6. The plan is put into effect
7. The results are measured and appraised

Figure 1. Decision points and components of an adult educational framework[7]

Our focus in this session is on 4a -- resources and sources in curriculum development.

Resources for Curriculum Development

The use of resources for curriculum development should help in alleviating some of the problems posed by lack of direct participation by adult learners in the design of Type I (content-centered) learning activities.

Such resources are defined broadly by Houle as

> any object, person, or other aspect of the environment which can be used for support or help....Resources may be categorized in any number of ways as materials, instruments, media, facilities, and so on.[8]

One way in which human resources can alleviate the problems posed by lack of direct participation by learners is through the use of advisory groups. An example would be one consisting of representatives of both labor and management in a specific occupation. This approach has constituted an essential step in the planning of new curricula for adults in technical and vocational education in the two-year colleges in this country. Such advisory bodies provide input that enables an institution both to assess the specific needs of adults and industry in a specific community, and to design programs that would interface between the potential available pool of workers and the job needs of industry and government. One example of such a need emerges from my home city of Ironwood, Michigan. Almost overnight in the sixties, with the closing of the mines, this community became a depressed area. It has since recovered, to some degree, by establishing itself as a winter recreation area for the Midwest. The developing of many major ski hills, resorts, restaurants, and stores required a large staff knowledgeable in the operation of these facilities. Soon, a program focusing on ski hill management was set up by the local two-year college, with the help of an advisory group, to meet the occupational needs of this geographic area. Similarly, the Federal Government has recognized the value of advisory groups in the design of curriculum to meet the specific employment needs in a particular community by training so-called disadvantaged adults through CETA programs.

Other advisory bodies that serve a very useful function in the development of curricula are those created by professional organizations, e.g., in the health sciences, the nurses associations which have developed curricula for the re-training of personnel through in-service education. Commissions also play important roles not only in giving advice about proposed curricula, but in actively creating and implementing them. An example is the Illinois Fire Protection Personnel Standards Commission, which bears that responsibility within municipalities and districts.

Moving to material resources, I would like to categorize them as (1) books that describe available curricula or contain directories and bibliographies which list both human and material resources; instructional materials, and media; and (2) data bases which are rich in sources for curriculum development.

Some useful books that you might want to explore are the following:

A National Annotated Bibliography of Curriculum Materials in Vocational and Career Education. Springfield, IL: Division of Vocational and Technical Education, 1974.

Jindra Kulich. Adult Education in Continental Europe: An Annotated Bibliography of English Language Materials, 1945-1969 ERIC document number ED 057 321.

Jindra Kulich. Adult Education in Continental Europe: An Annotated Bibliography of English Language Materials, 1970-1974. Toronto: International Council of Adult Education, 1975.

John Ohliger and David Gueulette. Media and Adult Learning: A Bibliography with Abstracts, Annotations, and Quotations. New York: Garland Publishing Co., 1975.

Stanley M. Grabowski and Ann C. Glenn. Directory of Resources in Adult Education. DeKalb, Illinois: ERIC Clearinghouse in Career Education, 1974.

Marilyn Schreiber. Directory of Vocational Information Resources in the United States. DeKalb, Illinois: ERIC Clearinghouse in Career Education, 1975.

With reference to data bases, I will, as I mentioned earlier, be discussing ERIC in some detail. Other data bases which you should be familiar with are reported in the Survey of ERIC Data Base Search Services. In this document, you will find listed a number of data bases that would assist you in specific areas of curriculum development, like the AIM/ARM file and the National Technical Information Service file. Incidentally, the educational materials contained in both files have been placed in the ERIC system and can be obtained through an ERIC search. For those of you interested in health science education, there are both MEDLARS and MEDLINE. And, of course, we have DATRIX II, which is a computerized service available from University Microfilms. On the international scene, UNESCO has developed a data base.

Sources for Curriculum Development

Through searches of the data base resources, we gain access to the names of individuals, institutions, agencies, and other organizations which are creating curriculum materials. I am sure that all of you are acquainted with the excellent work being done at the Center for Vocational Education

at Ohio State University. Another means by which you could locate sources is through the National Network for Curriculum Co-ordination in Vocational and Technical Education. This network has been set up for the national sharing of curriculum materials. Other important sources of information are found in professional associations such as the American Vocational Association, the Adult Education Association of the U.S.A., the National University Extension Association, and the American Society for Training and Development. A particular benefit that ASTD provides to its membership is a manual to assist people in the design of a learning activity. Another source is found in the professional journals which, in education, are reported in two resource systems -- the Educational Index and the Current Index to Journals in Education. The latter forms part of the ERIC data base.

ERIC

To conclude my remarks, I would like to explain how you could utilize the ERIC Clearinghouse in Career Education (ERIC/CICE). First, let me give you a little background. It is one of a nationwide network of sixteen Clearinghouses which focus on different areas in the broad field of education. As a part of this network, ERIC/CICE can place at your disposal a vast array of knowledge that represents the accumulated wisdom and experience of others who have faced problems similar to yours. The data base, as it is called, consists of 250,000 documents which I will describe later. The task of ERIC/CICE is to evaluate, abstract, and index documents that relate to topics in technical-vocational education, as well as in career education and adult and continuing education. The abstracts, or summaries, of the documents permit you to judge, quickly and easily, whether a given document would be useful to you.

Let us now proceed to examine what is involved in an ERIC search. Here, I propose to discuss the more sophisticated computer search, not the manual one, and to use examples from the general field of adult education. I am sure that you could easily transform these into examples from adult vocational education. Incidentally, the search procedure is not a formidable one, especially if it is thought of as a series of steps.

1. Define the Subject

The subject that is to be the focus of an ERIC search must be defined as precisely as possible, if the search is to be truly productive. The first step, "Define the Subject," is useful where a person is interested in a broad subject like "adult learning," but is somewhat vague (perhaps because of insufficient knowledge) about the specific information he seeks. (On the other hand, the person who knows exactly what he wants from ERIC/CICE can move directly to Step 2, "Identify the Factors.")

(a) Think about the subject. Ponder its nature and scope, the important concepts involved, its relation to other subjects or fields, etc. Try to formulate questions or statements (including hypotheses) you wish to pursue. Write down all the ideas you can think of, even if, at this preliminary stage, they seem very broad, tentative, overlapping, or even clumsy.

(b) Talk about the subject and your statements or questions with colleagues, friends, university professors, librarians, etc., especially persons who have an interest in or a knowledge of the subject. Such conversations will often help you to clarify your thinking, give you new insights, or suggest new avenues of inquiry. The staff of ERIC/CICE are always more than willing to help you.

(c) At this stage, you should refine your questions or statements to make them as precise as possible; they should state exactly what you want to know. Be alert to vague language, ambiguities, or irrelevant ideas that may have crept in. Addressing yourself to such questions as these might assist you:

In which area of adult education am I interested?

What information is already known and/or available?

Should I set a time limit on the information sought, i.e., last year, the previous seven years?

How will the resulting information be applied, in administrative decision-making, in the classroom, for my own professional growth?

2. Identify the Factors

Analyze the subject, that is, break it down into its major concepts, or factors. For example, if you were pursuing the application of the mass media to adult basic education, the obvious factors are "mass media" and "adult basic education."

3. Consult the Thesaurus of ERIC Descriptors

Once you have decided upon your factors, you are ready to use the resources of ERIC. The first step is to consult the Thesaurus of ERIC Descriptors, which is your guide to the system. It consists of more than 6,000 descriptors, or subject headings, used to index all documents in all sixteen ERIC Clearinghouses, not only in ERIC/CICE. This ERIC "language" is not static; rather, descriptors are added to take care of new concepts as they emerge from new documents entering the system. All documents are assigned several descriptors, beginning with major (starred) ones which reveal the concepts receiving special emphasis in the documents. The aim

of this procedure is to index each one as specifically as possible, so that it can be easily retrieved.

In consulting the Thesaurus, you should match the factors (and any "hidden" components) relating to your subject with the ERIC descriptors that seem most relevant; some will be more helpful to you than others. This process is sometimes referred to as "translating" your subject into ERIC language. The purpose is to help you select descriptors that will lead you quickly and efficiently to the information you require. To return to the factors "mass media" and "adult basic education," it is possible to break "mass media" down into "television," "radio," "newspapers," and "magazines." These are, in fact, ERIC descriptors. In "adult basic education," certain "hidden" components are present: "adult literacy," "illiterate adults," and so-called "disadvantaged groups," for whom adult basic education programs are designed. These, too, are ERIC descriptors.

It is suggested that you analyze your own subject in the same way by writing down all the factors that you can think of, and then the relevant descriptors. Now, the way the system works is that the descriptors you have chosen appear as subject headings in the two major ERIC resources known as RIE and CIJE. RIE stands for Resources in Education (formerly Research in Education) and CIJE for Current Index to Journals of Education. Together, they provide access to more than 250,000 documents in the total network of ERIC Clearinghouses. Both RIE and CIJE are published monthly with cumulative indexes.

The value of RIE can be seen in the fact that approximately 90 percent of the collection consists of 200-word abstracts of "fugitive," or unpublished documents in many categories: bibliographies, accounts of new programs, conference papers, curriculum guides, and many reports on research and

evaluation in education.* There is also a limited number of copyrighted books. Each document is indexed under an ED number and also by subject, author, and institution. "Identifiers" are used to index concepts, names of persons and places, etc., for which no appropriate descriptor exists. The entire text of almost every document is available on microfiche in many libraries, as well as in the Clearinghouses. Paper copies and microfiches of ERIC documents may be purchased from ERIC Document Reproduction Service, P. O. Box 190, Arlington, Virginia, 22210.

CIJE consists of the titles of articles appearing in more than 750 education journals processed by the various Clearinghouses. Where a title does not sufficiently reveal the content of an article, a fifty-word annotation is supplied. As adult vocational educators, you will be interested to know that ERIC/CICE monitors such publications as Adult Education, Adult Leadership, Journal of Business Education, Journal of Continuing Education in Nursing, Journal of Extension, Journal of Home Economics, Man/Society/Technology, and Training and Development Journal. Each article in CIJE is assigned an EJ number. Descriptors and identifiers are used as in RIE. No microfiche or paper copy is available.

4. Conduct an ERIC Computer Search

The model for a computer search (Figure 1) shows that once the relevant descriptors have been selected, the user can employ an on-line or an off-line system.

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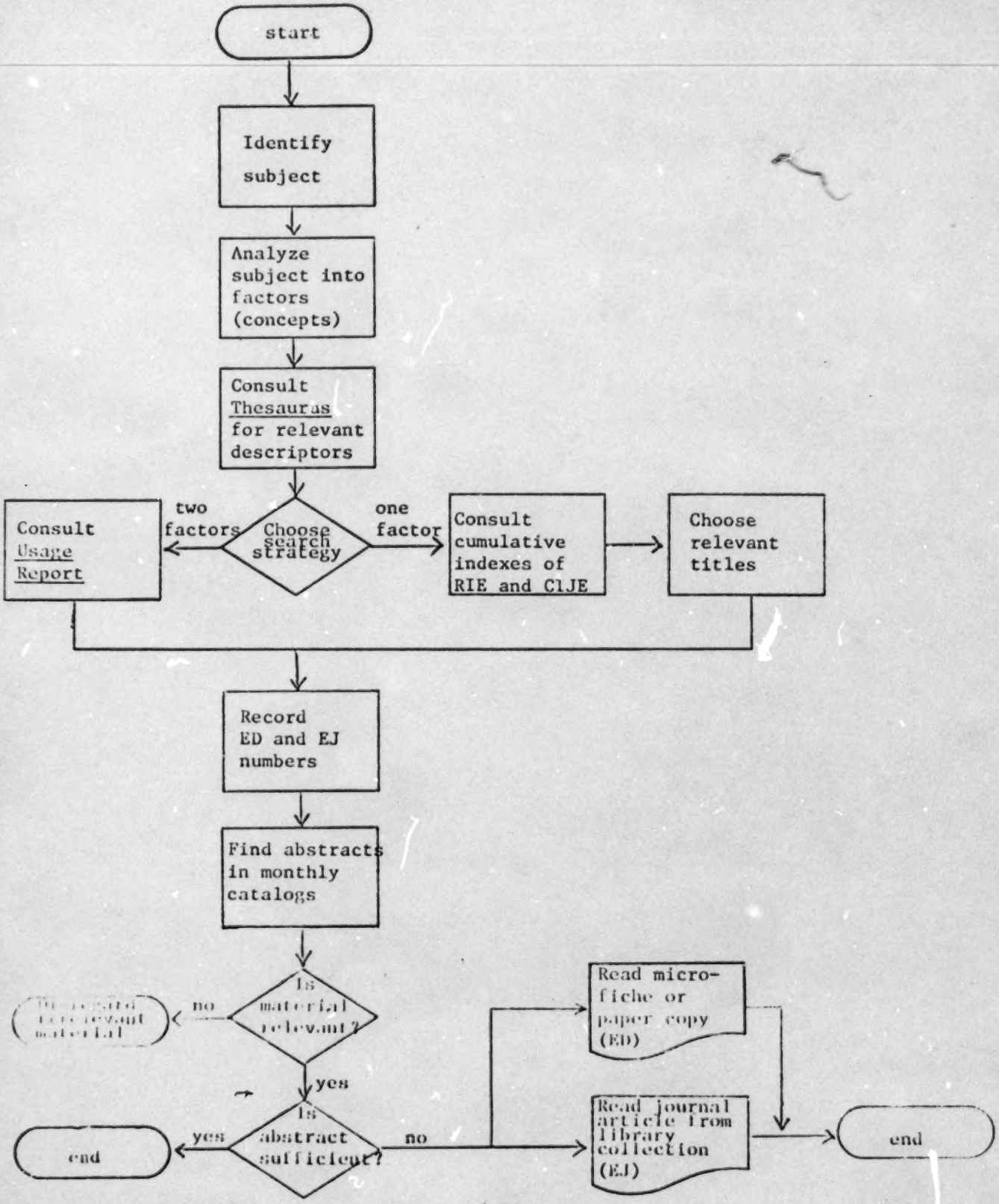
*Only those doctoral dissertations which do not appear in Dissertation Abstracts International are considered for inclusion in ERIC/CICE. Master's theses which make significant contributions are also considered.

Figure 1

MANUAL SEARCH PROCEDURE



Often, only one is available. The unique feature of an on-line system is that the user gives input to the computer in the form of descriptors and receives immediate feedback--a process that Tiedeman has called "reciprocal interaction," or "mediation," between man and machine.[9] If the computer reports a large amount of available material, the subject being searched may be too broad, and the user will normally respond by making the necessary adjustments. Conversely, if insufficient material exists, the subject may be too narrowly defined, or perhaps there is a paucity of research in that area. Another way that the computer interacts with the user is by presenting completely new aspects of a subject or suggesting new lines of inquiry. Thus, an impersonal resource works in a personal way with a receptive user. Once the computer has printed out the abstracts, the user selects the relevant ones and decides, from reading them, whether the original documents would be helpful. Where the user cannot decide from the abstracts, he/she obtains either the microfiches or the paper copies of the original documents and, if desired, the journal articles from the library.

The user of an off-line system experiences a different relationship with the computer, by virtue of a different approach to it. In an off-line system, the computer receives requests from a number of users at one time. These requests are combined in a "batch" search. The computer responds by printing out all the available abstracts relating to the descriptor input. Thus, no "personal" relationship exists between man and machine. After the individual users receive the abstracts, they proceed in the same manner as the user of an on-line system.

We shall now break into our small-group workshops for the purpose

of developing and implementing an industrial program for a small community. To assist you with the resources needed for this task, I have conducted five comprehensive ERIC searches in your specific areas of interest, that is, business and distributive education, health occupations education, home economics education, trade and industrial education, and vocational agriculture. You will find, in your respective meeting rooms, six copies of the search that relates to your area. Thank you for your attention.

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